

**Before the  
United States of America  
Federal Energy Regulatory Commission**

**Working Paper on Standardized Transmission Service     )     Docket No. RM01-12-000  
and Wholesale Electric Market Design                     )**

**Comment of the Staff of the  
Bureau of Economics and the Office of the General Counsel  
of the Federal Trade Commission<sup>1</sup>**

July 23, 2002

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<sup>1</sup> This comment represents the views of the staff of the Bureau of Economics and the Office of the General Counsel of the Federal Trade Commission. They are not necessarily the views of the Federal Trade Commission or any individual Commissioner. The Commission has, however, voted to authorize the staff to submit these comments.

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**I. INTRODUCTION AND SUMMARY**

The staff of the Bureau of Economics and the Office of the General Counsel of the Federal Trade Commission (FTC) appreciates this opportunity to present its views concerning the Federal Energy Regulatory Commission's (FERC) efforts to develop a standard market design for wholesale electric power markets. This comment supplements the views previously offered by the FTC staff in this docket,<sup>2</sup> and responds to issues raised in the March 15, 2002 FERC Working Paper. As FERC continues to refine proposals to be included in a future Notice of Proposed Rulemaking regarding standard market design, we offer our views on four topics: (1) performing market power assessments as part of the standard market design, (2) ensuring efficiency incentives within regional transmission

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<sup>1</sup> This comment represents the views of the staff of the Bureau of Economics of the Federal Trade Commission and the staff of the General Counsel's Office of Policy Studies. They are not necessarily the views of the Federal Trade Commission or any individual Commissioner. The Commission has, however, voted to authorize the staff to submit these comments. Inquiries regarding this comment should be directed to John C. Hilke, Economist and Electricity Project Coordinator in the Bureau of Economics (801-524-4440 or [jhilke@ftc.gov](mailto:jhilke@ftc.gov)) or Michael Wroblewski, Assistant General Counsel for Policy Studies (202-326-2155 or [mwroblewski@ftc.gov](mailto:mwroblewski@ftc.gov)).

<sup>2</sup> FTC Staff Comment, Docket No. RM01-12-000 (Apr. 3, 2002) *available at* <http://www.ftc.gov/be/v020012.pdf>.

organization (RTO) operations, (3) avoiding customer risk if RTOs offer financial transmission rights (FTRs), and (4) providing incentives to expand transmission and generation capacity efficiently.

In addition to these specific views, we continue to support the efforts of FERC to increase competition in wholesale electric power markets through creation of RTOs in all areas of the country. We continue to view favorably the articulation in FERC Order 2000 of the functions and characteristics of effective RTOs, with the caveat elaborated upon here (and in our previous RTO comments) that incentives for efficient RTO operation should also be viewed as a necessary characteristic. We also encourage FERC's efforts to cooperate and coordinate with states to increase demand-side participation in electric power markets. This coordination is likely to be critical to the success of efforts to increase competition in electric power markets.

#### *FTC Experience in the Electric Power Industry*

The FTC is an independent administrative agency responsible for maintaining competition and safeguarding the interests of consumers. In this industry, the staff of the FTC often analyzes regulatory or legislative proposals that may affect competition or the efficiency of the economy, in addition to its review of proposed mergers involving electric and gas utility companies. In the course of this work, as well as in antitrust research, investigation, and litigation, the staff applies established principles and recent developments in economic theory and empirical analysis of competition issues. The Commission has issued two Staff Reports (July 2000 and September 2001) on electric power market restructuring issues at the wholesale and retail levels. The July 2000 FTC Staff Report established a policy

framework for increased competition in wholesale and retail electric power markets.<sup>3</sup> The September 2001 FTC Staff Report reviewed those features of state retail competition plans that have provided benefits to consumers and those that have not. It also provided analysis concerning whether states had sufficient authority to implement successful retail competition programs.<sup>4</sup> Moreover, the FTC has reviewed proposed mergers involving electric and gas utility companies.

### *Summary of Overall Themes*

Before examining in detail the four topics noted above, we offer two general suggestions on the set of principles that FERC has articulated in the Working Paper to guide the development of standard market design. First, two of the principles, providing pricing signals through the use of locational marginal pricing (LMP) and ex post market monitoring by RTOs, are unlikely to be sufficient to prevent harm to customers from the exercise of generation market power. A stable, ex ante framework established to address market power through structural remedies that apply during pertinent periods, and that preserves incentives to invest in efficient new generation and transmission capacity, is likely to serve customers best over time. This framework should be established as part of the standard market design.

A second general concern we wish to emphasize is that RTO governance issues are likely to be

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<sup>3</sup> FTC Staff Report: Competition and Consumer Protection Perspectives on Electric Power Regulatory Reform (Jul. 2000), *available at* <<http://www.ftc.gov/be/v000009.htm>>. This report compiles previous comments that FTC Staff had provided to various state and federal agencies. The FTC staff comments are available at <<http://www.ftc.gov/be/advofile.htm>>.

<sup>4</sup> FTC Staff Report: Competition and Consumer Protection Perspectives on Electric Power Regulatory Reform, Focus on Retail Competition (Sep. 2001), *available at* <<http://www.ftc.gov/reports/index.htm>>.

critical in addressing subsequent RTO policy issues. To date, governance discussions have often focused on the distinction between non-profit RTOs and Transcos.<sup>5</sup> Another FERC decision on RTO governance, however, may be more fundamental. In particular, FERC's most important RTO governance decision is likely to be whether an RTO (1) internally sets market rules<sup>6</sup> *as well as* performs market operations (such as balancing, settlement, and scheduling) or (2) restricts itself to establishing market rules while contracting with an independent entity for market operations. This decision likely will have wide-ranging consequences for how RTOs need to be regulated and how they are likely to perform. Our review of the interrelationships between governance and transmission rights below indicates that the second approach to governance has distinct advantages.

The remainder of this comment discusses four specific suggestions that related to these two themes.

## **II. MARKET POWER MITIGATION AND MARKET-BASED RATES**

### **A. The Present Situation**

FERC currently assesses market power in wholesale electricity markets in at least three

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<sup>5</sup> A Transco is a for-profit firm that provides transmission services. An RTO in the form of a Transco would have to meet all of the requirements set forth in FERC Order 2000, including independence from owners of generation assets in the area in which the Transco provides transmission services.

<sup>6</sup> Market rules refer to those institutions and rules that govern market operations, principally, balancing, scheduling, and bidding rules for the day-ahead or real-time energy markets.

contexts: merger analysis,<sup>7</sup> granting (or renewing) market-based rates to wholesale electricity suppliers,<sup>8</sup> and RTO market power monitoring and mitigation proceedings.<sup>9</sup> FERC has used a disparate analytical framework in each context to evaluate the same competitive dynamic. FERC may wish to take this opportunity, as it develops the RTO market monitoring and mitigation procedures to be included as part of standard market design, to converge the concepts and techniques it uses to evaluate market power. We recommend that FERC base its competitive analysis on the techniques and approaches outlined and discussed in the Department of Justice and Federal Trade Commission Horizontal Merger Guidelines.<sup>10</sup>

## **B. Commonality of Concepts and Investigation Techniques**

Despite FERC's differing approaches to market power evaluation in these three contexts, the

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<sup>7</sup> In merger analysis, FERC's framework document is Appendix A to its Merger Policy Statement. FTC staff commented on the proposed revisions to this policy in FERC Docket No. RM98-4-000 (Sep. 11, 1998), *available at* <<http://www.ftc.gov/be/v980022.htm>>. *See also* Mark W. Frankena, "Geographic Market Delineation for Electric Utility Mergers," *The Antitrust Bulletin* (Summer 2001) at 357-402.

<sup>8</sup> FERC revisits the question of whether a generator can charge market-based rates in wholesale electric power markets whenever the generator's existing grant of authority expires. The present methodology is the supply margin assessment (SMA). The SMA replaces the hub and spoke methodology that FERC relied upon previously. FERC indicated that it views the SMA as in interim approach.

<sup>9</sup> In addition, FERC's new Office of Market Oversight and Investigation will likely monitor market power issues as well.

<sup>10</sup> U.S. Dep. of Justice and Federal Trade Comm., Horizontal Merger Guidelines (Apr. 2, 1992, as revised Apr. 8, 1997) (Horizontal Merger Guidelines). We note that the Horizontal Merger Guidelines are based on concern about either unilateral market power or coordinated interaction. To date, FERC's market power assessments appear to have been based primarily on unilateral market power concerns. We encourage FERC to include concerns about coordinated interaction as a potential source of competitive harm.

underlying economic concepts that are appropriate in market power evaluation (market definition of relevant product and geographic markets, market structure, entry conditions, competitive effects, and remedy considerations) are common across all three. The primary difference among the three contexts involves whether the investigation is focused on the existing level of market power (RTO market monitoring and market based rate determinations) or the prospective level of market power (merger analysis).

Moreover, the most effective *techniques* for assessing market power are likely to overlap across the three types of evaluations. In the electric power industry, the analysis of prices and power flows (either through studies using actual historical data or through computer simulation modeling) is a common element that deserves emphasis. Analyses should appropriately represent transmission constraints and the dispatch decision processes operating in an RTO, independent system operator (ISO), or other control area. For example, simulations using actual ISO dispatch/scheduling software can determine the prices a firm owning generation assets could charge, given all other firms' actual bids, and still be called upon to produce in the market. Knowledge of such bid prices by FERC could be a useful input into decisions that involve prospectively assessing market power, whether for purposes of approving market-based pricing authority or for merger/acquisition evaluation. Thus, this technique could provide a more informed and realistic analysis of existing or potential market power problems.

### **C. Mitigation of Market Power through RTO Formation and Implementation**

One benefit of the formation and implementation of effective RTOs may be reduced costs of

making wholesale electric power trades. Reducing rate pancaking<sup>11</sup> and reducing discrimination in transmission services may contribute to lowering wholesale trading costs. By improving the accuracy and timeliness of transmission congestion signals, and by providing mechanisms for independent investments in grid enhancements, implementing RTOs may further reduce existing market power in electric power markets. RTOs also are likely to reduce withholding of transmission service, which may be a problem when a vertically integrated transmission owner controls, for example, calculation of available transmission capacity (ATC). These changes may increase the size of geographic markets for wholesale electric power, and thereby increase the number of suppliers and decrease concentration.<sup>12</sup>

**D. Potential Opportunity for Interim, Low-Cost, Adjustable Remedies to Address Existing Market Power**

FERC may wish to consider using a structural remedy, such as medium- to long-term forward contracting,<sup>13</sup> to address existing market power.<sup>14</sup> Medium- to long-term forward contracting by generators is a potentially attractive structural remedy given concerns about the costs and effectiveness

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<sup>11</sup> In the absence of large regional transmission entities, wholesale electric power trades may face substantially higher costs due to fees collected by each transmission owner located between the generator and the load. The multiple fees associated with many small transmission systems between the generator and the load are termed “pancaked” rates.

<sup>12</sup> A countervailing effect may occur in the short run if general decreases in transmission costs result in increased transmission congestion. Increased congestion may cause markets to shrink and become more concentrated with fewer suppliers. Transmission enhancements may help to alleviate such local adverse consequences.

<sup>13</sup> In this context, medium- to long-term means a duration of several months, at the low end, to several years or more. Appropriate durations may vary by region, depending on market conditions specific to the region(s) involved, typical time to enter by new generators, and similar factors.

<sup>14</sup> For purposes of this discussion, we assume that innovation, existing forms of competition, and merger reviews are sufficient to discourage new accumulations of persistent market power.



of behavioral remedies, as well as the legal and timeliness issues that may be involved in some divestitures of generation or transmission capacity (the traditional and often preferred structural remedy). In this context, forward contracting requires a generator to supply an agreed amount of electricity at a predetermined price that cannot be increased by output.

Through medium- to long-term forward contracting, FERC can remove the incentive of a supplier to withhold output in an effort to raise prices. This type of forward contracting has the potential advantages of relatively low initial costs and flexibility to adjust the amount of forward contracting required as competitive conditions change. Further, forward contracting may be tailored to apply only during periods when there are significant market power concerns, or only to the subset of suppliers or facilities that are likely to have generation market power.<sup>15</sup>

### **III. EFFICIENT RTOs**

RTO governance issues are likely to be among the most important issues facing FERC as it considers various standard market design options. Among governance issues, FERC may wish to focus on the potential distinction between the RTO governing entity, the market operator, and the grid maintenance organization(s)<sup>16</sup> and their respective incentives to be efficient and unbiased. One model

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<sup>15</sup> In operation, a forward contracting remedy could be adjusted on a number of bases. For example, the amount of capacity subject to forward contracting could change to match the amount required to eliminate unilateral market power by that supplier. This requirement would vary with transmission congestion conditions, changes in the shape of the supply curve, and changes in the price sensitivity of demand.

<sup>16</sup> The grid maintenance organization likely would also be responsible for interconnection with generators under rules of interconnection established and enforced by the RTO board.

FERC may wish to consider is a hybrid RTO model that would include (1) an independent RTO board (either a nonprofit entity or an alternative governance arrangement) that develops and enforces rules for operation of the market and for maintenance of the grid, (2) a for-profit firm that operates the market under contract with the RTO board, and (3) one or more independent transmission companies (ITCs) that maintain the grid under the rules developed and enforced by the non-profit RTO board.<sup>17</sup>

**A. Deficiencies with Respect to Bias and Inefficiency in the Transco and Non-Profit RTO Market Operator Models**

The pure non-profit RTO model and the for-profit Transco model have both been considered as potential approaches to organize and operate the transmission grid in the United States. Under the pure non-profit RTO model, all RTO functions are carried out on a non-profit basis. The Transco model features a for-profit firm that acts as an RTO. In earlier comments, the FTC staff expressed reservations about both of these models.<sup>18</sup> In the case of the pure non-profit RTO model, we are concerned about the lack of incentives to operate efficiently, including incentives to avoid “gold plating”<sup>19</sup> and to be attentive to customer service. We continue to recommend that FERC include incentives for efficient operations as a minimum characteristic for effective RTOs.<sup>20</sup> In the case of the

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<sup>17</sup> An ITC in this context is a for-profit firm that provides transmission maintenance services under the rules established by a non-profit RTO with authority in the same or a broader area.

<sup>18</sup> FTC staff comments to the Public Service Commission of the State of Mississippi, Docket No. 96-UA-389 (August 28, 1998) and to FERC, Docket No. EL99-57-000 (May 27, 1999), *available at* <[www.ftc.gov/be/advofile.htm](http://www.ftc.gov/be/advofile.htm)>.

<sup>19</sup> “Gold plating” in this context refers to decisions that reduce risk without regard to the costs of doing so.

<sup>20</sup> FTC staff comment to FERC, Docket No. RM99-2-000 (August 16, 1999), Section IV.

Transco model, we are concerned that a for-profit Transco would have incentives to discriminate against a new generator whose location would reduce demand for transmission services. For example, if an independent generator elects to locate a new generating facility close to a load, that decision likely would result in reduced demand for transmission services supplied by the Transco. Consequently, the Transco would have incentives to discourage the generator from selecting such a location or to raise the generator's costs if it did pick such a location.<sup>21</sup> Transcos would have similar incentives to discourage distributed generation investments.

Since the filing of our previous comments on the Transco model, we have identified two additional concerns about this model. First, due to taxation issues and public/private ownership concerns,<sup>22</sup> it appears that organizing for-profit Transcos may be subject to considerable lags that would hinder timely implementation of this model in all areas of the country.<sup>23</sup> Second, control of the

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<sup>21</sup> Interconnection standards, a form of behavioral (rather than structural) remedy, may alleviate some of this concern. However, as we discussed in the July 2000 FTC Staff Report in connection with FERC Order No. 888, behavioral rules may be particularly problematic in wholesale electric power markets because even subtle forms of discrimination can have major financial implications for generators, and because detection and documentation of discrimination is likely to be difficult in the extremely time-sensitive setting of these markets. Examples of financially important but subtle forms of discrimination could include slower than normal repair of damaged transmission lines serving specific generators, lower than normal maintenance on such lines, and disproportionate application of transmission line relief measures directed at these lines. *See* FTC July 2000 Staff Report at 18-20.

<sup>22</sup> A taxation concern is that transfer of transmission assets to a Transco could constitute a sale of assets that would trigger taxation of the capital gain on these assets, whereas transfer of control of transmission assets to a non-profit entity may not trigger such taxation. A concern about the transfer of transmission assets to a Transco from a publicly owned utility is that some public utility assets have been financed with tax exempt bonds, and tax exempt bonds may proscribe the subsequent use of such assets by a for-profit entity.

<sup>23</sup> Lags also may occur because Transcos may have difficulty satisfying the independence requirement of FERC Order 2000 in light of the vertical transmission discrimination issues that can arise

grid by a Transco is likely to be incompatible with expanding the grid through investments by merchant transmission firms (firms that finance and build specific transmission system improvements, but not whole systems), because potential discrimination and operating incompatibilities between the Transco and merchant transmission firms may create so much risk for prospective merchant transmission firms that they will not enter, or will invest less. Establishing conditions favorable to merchant transmission firms may well be an important element in obtaining increased transmission investment in the United States.<sup>24</sup> Merchant transmission firms may be more likely to identify novel routing and technology options than a Transco. Further, a Transco may have more incentives to preserve congestion (from which the Transco profits)<sup>25</sup> than a merchant transmission firm.

## **B. Alternative RTO Models**

The foregoing deficiencies of the non-profit RTO (market operator) and the for-profit Transco governance models suggest considerations of alternative RTO governance structures that are commonly termed “hybrid” RTO models.

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when the market operator or transmission operator has generation investments in the same area.

<sup>24</sup> Transmission investment has been viewed as inadequate. *See, e.g.*, Paul Joskow, “Regional Transmission Organizations: Don’t Settle for Nth Best ( $N \gg 1$ )”, unpublished paper (Sep. 21, 2001). In recent years, grid expansion has been slight, despite a large increase in wholesale electric power trades as independent generators became more common, traditional utilities divested capacity, and Orders 888 and 889 at least partially alleviated transmission access discrimination. Thomas M. Lenard, “RTOs, Market Power and the New Regulatory Agenda at FERC,” Progress and Freedom Foundation Release 9.4 (Feb. 2002) at 11-12.

<sup>25</sup> The Transco profits from full utilization of its lines if its rates are regulated and, therefore, the rates are fixed during the period between rate reviews. If demand for its transmission services falls due to new generators locating close to loads, the Transco may earn less than the allowed rate of return until the next rate review. It also faces the risk that regulators will treat some of the transmission investment that is no longer needed as an imprudent investment that cannot be recovered by the Transco.

*Hybrid RTO Model:* Hybrid RTO models are designed to avoid market biases while creating strong incentives for efficient operation of the market and maintenance of the grid.<sup>26</sup> Thus, the hybrid RTO model may avoid the two principal drawbacks of the for-profit Transco and non-profit RTO operator models. In the hybrid RTO model, market operation and grid maintenance rules are developed and enforced by an independent RTO governing board<sup>27</sup> while market operations and grid maintenance within the same region are carried out by a for-profit market operator and one or more for-profit ITCs<sup>28</sup> (and other transmission owning entities<sup>29</sup>), respectively. Balancing, settlement and scheduling of the market could be carried out by a contractor serving the RTO non-profit board. In the hybrid RTO model, a reasonable basis for allocating RTO activities among the independent RTO governing entity, the market operator, and the ITCs would be to reserve establishing and enforcing

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<sup>26</sup> For additional discussion of the hybrid model, see, *e.g.*, Comment of William W. Hogan, FERC Docket No. RM01-12-000 (Mar. 12, 2002) and the attached paper co-authored with John D. Chandley, “Independent Transmission Companies in a Regional Transmission Organization.”

<sup>27</sup> Effective governance of a non-profit transmission entity can be difficult. FERC found that the stakeholder boards of the California ISO and PX were often unable to make policy decisions in a timely fashion and that the members of these boards were subject to untoward pressures. FERC Docket Nos. EL00-95-000 *et al.* Concerns about bias are sometimes addressed by organizing on a non-profit basis and by appointing a governing board of experts. As a potential alternative to a non-profit board, FERC may wish to consider how governance of stock and commodity exchanges is arranged among users of the exchanges as a potential source of insights concerning RTO governance issues.

<sup>28</sup> Our May 27, 1999 comment to FERC (Docket No. EL99-57-000) identified this approach as a potentially attractive model to address both the efficiency and discrimination concerns. The independence of the ITC is relative to ownership of generation assets in the same area. An ITC would own and maintain a section of the grid within an RTO and under the RTO governing board’s rules regarding grid maintenance.

<sup>29</sup> Federal, state, tribal, and local government entities would be the primary examples.

market rules, as well as the siting and grid maintenance rules for the independent RTO governing entity.<sup>30</sup> The market operator would handle balancing, settlement, and scheduling. The ITCs would handle maintenance of the transmission assets in the RTO's region.

*Displacement of Market Operators and ITC Managements:* One of the principal incentives for efficient operation in the for-profit sectors of the economy is the threat that inefficient managements will be displaced through changes in ownership of a firm. Although the best model would be competition for actual transmission services, the same concept and similar efficiency incentives may be applied to RTOs through contracting with third parties.<sup>31</sup> One possibility is for the governing body of the RTO to issue a request for proposals from competing managers or teams of managers for the opportunity to operate the market under the rules established by the non-profit governing board. If third-party contracting were implemented by the RTO board, the market operator could be displaced by the board if costs escalated or customer service deteriorated. The RTO board could do so, for example, based on objective measures of performance, comparative measures of performance, or customer satisfaction indicators. FERC may wish to encourage RTO boards to consider the contracting out of RTO management functions. As independent for-profit entities, ITCs would already be subject to this form of efficiency incentive.

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<sup>30</sup> To the extent that uncertainty persists about the most efficient and effective division of functions within a hybrid RTO between the independent RTO governing entity, the RTO contractor, and the ITCs, this is one area within standard market design where FERC may wish to allow a variety of approaches to be used on a temporary basis in order to ascertain which arrangements eventually should be treated as the standard division of the RTO functions developed in Order No. 2000.

<sup>31</sup> There is a considerable literature on increasing efficiency in publicly financed organizations by introducing competition through various forms of contracting. See, e.g., John C. Hilke, Competition in Government-Financed Services (Quorum Books, 1992).

#### **IV. RISK ISSUES RAISED BY RTO ISSUANCE OF FTRs**

The Working Paper envisions that RTOs will have the responsibility to issue FTRs to customers of the transmission grid. With an FTR, a transmission customer can obtain transmission services at a price that is determined before the service is provided. Thus, a customer holding an FTR can obtain the associated transmission service at a cost no greater than the cost of the FTR.<sup>32</sup> The following sections discuss the importance of FTRs and a related concern that may arise if the RTO or other regulated entity (distribution utility), bears risk due to issuing FTRs.

##### **A. Importance of FTRs**

Many electric power customers and suppliers are likely to desire to reduce risk that transmission congestion will impede electric power transactions or unexpectedly raise transmission prices. As the Working Paper notes, customers can achieve price certainty for transmission services by acquiring tradeable transmission rights to use the transmission grid. FTRs may be an efficient way for customers to obtain transmission services at a known price.<sup>33</sup> Customer demand for FTRs also may provide incentives for new transmission projects or enhancements to existing transmission lines by merchant transmission firms or incumbent transmission firms when investors are allowed to sell FTRs or

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<sup>32</sup> Before issuing FTRs, the RTO would have to assess the capacity of the grid and assure that FTRs were not issued in excess of system capacity. A variety of arrangements can be used to create FTRs, assign FTRs to transmission customers, and settle congestion charges and payments associated with FTRs. One approach to assigning FTRs is to hold auctions for them.

<sup>33</sup> Existing ISOs successfully have used this approach in order to reduce uncertainty regarding transmission costs to transmission customers. The RTO operating in the Mid-Atlantic states (PJM) estimates that FTRs have hedged from 98% to 99% of congestion costs. The PJM Market Monitoring Unit's recent report discusses the FTR system in PJM and its recent performance. PJM Market Monitoring Unit, PJM Interconnection State of the Market Report 2001 (Jun. 2002) at 127-42.

have rights to the proceeds of FTRs that are made possible by these new investments. (*See* Section V below.) A customer interested in reducing price risk for a particular transmission service can buy appropriate FTRs to ensure that the customer will receive the transmission service, and that the actual price of the transmission service is no more than the pre-paid price of the associated FTRs. Once RTOs are established, it likely will continue to be important for electric power suppliers and buyers to reduce transmission price risk.

### **B. Who Bears Risk in Issuing FTRs and What Are the Consequences?**

Critical questions about issuing FTRs include: what risks arise from offering FTRs, who bears these risk, and what are the consequences for consumers (and for the financial viability of RTOs and regulated firms) if the RTO or regulated firms bear such risks? For example, the issuer of FTRs might incur risk from liability for issuing more FTRs than the system is capable of satisfying (due to weather damage or plant outages creating loop flows that reduce the grid's transmission capabilities in aggregate). If the value of an FTR turns negative, the issuer might be found to be at fault.<sup>34</sup>

Significant concerns may arise if regulated entities, such as transmission owners, bear risk associated with issuing FTRs. If so, the risk is likely to be shifted to customers through higher rates. If the non-profit RTO bears the risk, it will have to either pass the risk on to its customers in the form of higher fees or face financial distress. We encourage FERC to identify risks that may be associated with issuing FTRs and to avoid policies that would result in RTOs or other regulated entities bearing such

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<sup>34</sup> *See* Carl F. Imparanto, "Self-Management of ATC by the Marketplace" (Proceeding of the 32<sup>nd</sup> Hawaii International Conference on System Science, IEEE paper 0-7695-0001-3/99, 1999). Providing the transmission service associated with an FTR might require redispach of the system with associated costs of out-of-merit dispatch.



risk without opportunities to hedge the risks.<sup>35</sup>

### **C. One Approach to Addressing Risk Associated with Assigning FTRs**

If a hybrid model for transmission grid management is used, FERC may wish to consider allowing the for-profit market operator to issue FTRs in contrast to assigning the risk of issuing FTRs to the RTO's independent governing entity or to transmission owners. If the entity offering FTRs is the for-profit firm contracting with the RTO's governing entity to operate the market, the issuance of FTRs should provide incentives for the contractor to perform efficiently, and consumers would not necessarily bear the risk associated with issuing FTRs. For example, if FERC allowed the market operator to seek to hedge against the risk associated with issuing FTRs by repackaging and selling various components of risk, such as those due to storms, drought, and so on, the result likely would be an efficient, market-based allocation of this risk to parties that can bear this risk at least cost.<sup>36</sup>

## **V. INCENTIVES FOR SECURING SUFFICIENT TRANSMISSION AND GENERATION CAPACITY**

Investment in transmission expansions and upgrades is commonly perceived to have been

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<sup>35</sup> Exposing regulated firms to unhedged risk is reminiscent of the situation facing California distribution utilities and consumers in recent years. The distribution utilities were required to offer retail service at fixed rates while being discouraged from hedging risk associated with changes in spot market prices for wholesale electricity. *See* John C. Hilke & Michael Wise, "Who Turned Out the Lights? Competition and California's Power Crisis," 15 Antitrust 76-81 (Summer 2001).

<sup>36</sup> For a discussion of the efficiency advantages of allocating costs to the lowest price (least cost) supplier in a regulatory framework, see W. Kip Viscusi et al., Economics of Regulation and Antitrust (MIT Press 3d ed. 2000) at 700-09.

inadequate in recent years.<sup>37</sup> Some of this decline may be attributable to increased uncertainty about transmission investment returns and lags in completion of transmission projects.<sup>38</sup> FERC may wish to consider two issues as it seeks to ensure that efficient transmission and generation capacity are available to meet expected demand.

#### **A. Importance of Appropriability for Transmission Investment**

To encourage new transmission investment where it is efficient, FERC is considering allowing transmission investors to sell freely the FTRs associated with their respective transmission additions.<sup>39</sup> This step would remove new transmission investments from the existing cost-based rate regulation of transmission services. In many circumstances, unregulated (merchant) transmission providers should find strong incentives to undertake new transmission investments under this approach. The value of the FTRs reflects the transmission congestion that is avoided because of the transmission project.

Although authority to sell FTRs associated with a new transmission project may provide adequate incentives for transmission investment, there may be exceptions where the system benefits of a project, such as increased system reliability, exceed the benefits that can be appropriated by sale of the associated FTRs. If FERC determines that lack of appropriability substantially undermines transmission

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<sup>37</sup> See Joskow, *supra* note 24.

<sup>38</sup> Regulatory uncertainty and extended siting reviews may have contributed to increases in perceived risk in making transmission investments. More generally, while regulatory policies such as rate caps and rate-of-return regulation may reduce prices, they often mute investment signals at the same time, and thus potentially leave the market with less investment than would otherwise be the case. Such policies may be desirable for other reasons, but do entail this cost.

<sup>39</sup> Section C of the “Working Paper on Standardized Transmission Service and Wholesale Electric Market Design.” Under this approach, the transmission investor would own the FTRs that are available because of the transmission improvement (as determined by the RTO) and could resell these FTRs.

investment incentives for one or more transmission projects, FERC may wish to evaluate whether providing additional incentives (*e.g.*, higher allowed rates of return for regulated transmission firms, or payments beyond the value of FTRs for merchant transmission investors) to reflect the system benefits would increase efficiency.

### **B. Alternative Policies to Provide Entry or Expansion Incentives in Generation**

If FERC finds that concerns other than efficiency (*e.g.*, existing market power in generation markets<sup>40</sup>) cause it to adopt policies that reduce generation entry and other supply expansion incentives, FERC may wish to consider policies to supplement generation investment incentives. One such approach would be to require load serving entities to secure a substantial portion of the capacity to meet future peak demand levels. This would require these entities to obtain contracts for future generation supply commensurate with peak demand projections several years into the future. This requirement could create additional incentives for generation investment (or equivalent substitutes for generation). The objective of the requirements would be to restore incentives for future generation expansions to the level that would have existed in the absence of policies that cap wholesale prices or otherwise reduce generation investment incentives.<sup>41</sup> By using a time frame for capacity requirements

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<sup>40</sup> As stated earlier, markets are more likely to perform well if market signals are fully expressed. We recognize, however, that the history of the electric power industry raises concerns about existing market power that generally do not pertain in other industries. For example, the FTC has recognized that merger enforcement generally was not applied to the electric power industry during much of the previous century because rate regulation was expected to be pervasive and persistent. *See* FTC Letter to the Honorable Thomas E. Bliley, Chairman, Committee on Commerce of the United States House of Representatives (Jan. 14, 2000), at Section I.

<sup>41</sup> FERC may wish to consider using this approach to fully or partially replace existing installed capacity programs.

that is longer than the period required for entry, FERC would avoid putting retail suppliers in a position of contracting at high prices with existing generators in markets where one or more incumbent generation suppliers have unilateral market power.

Coincidentally, capacity requirements of this type might allow FERC to assist states in developing programs to increase the sensitivity of demand to wholesale price changes. In particular, FERC could allow load serving entities to demonstrate that they are effectively arranging to meet future peak loads, either by securing generation contracts or by reducing demand through curtailment contracts with customers. Demand curtailment associated with residential, commercial, and industrial real-time or time-of-use metering programs can be a substitute for generation capacity increases, because they have equivalent effects in reducing tight system conditions, and the costs of such programs may be lower than contracting for or building generation capacity.

## **VI. CONCLUSION**

This comment has addressed some of the remaining issues in standard market design that FERC has raised in its Working Paper. FERC may wish to develop a common framework and set of tools across its various settings for market power evaluation. Evaluation of requests for market-based rates may be an attractive venue to establishing an ex ante set of structural remedies that may be appropriate in curtailing existing market power, which is most likely to arise in periods of tight system conditions or when concentration among relevant suppliers is high. When some form of remediation is appropriate, FERC may wish to give added focus to medium- to long-term forward contracting as a potential, readily adjustable, structural remedy that preserves incentives for transmission and generation

investment to alleviate market power and scarcity.

Another set of issues involves how to organize RTO governance, market operations, and grid maintenance. An appealing alternative to Transcos or non-profit market operators may be the hybrid RTO model. Under this model, for example, an independent governing entity develops and enforces market operating and grid maintenance rules, while a for-profit firm operates the markets under contract with the RTO's governing entity, and while one or more ITCs maintain the grid within the RTO region. This model may be relatively quick to implement and may provide both enhanced efficiency incentives and curtailed incentives for discrimination. One of the services that FERC may reasonably expect to be offered under RTOs is FTRs. FERC may wish to avoid creating arrangements for FTRs that implicitly shift risk to consumers and threaten the RTO's financial stability. An attractive approach within the hybrid RTO model context may be to allow the RTO's contracted market operator to issue FTRs and to hedge the risk of issuing FTRs. Such an arrangement should avoid shifting risk to consumers while creating incentives for efficient operation of the market.

Finally, FERC may reasonably assume that allowing investors in new transmission projects to sell associated FTRs will provide incentives to invest efficiently in such enhancements. In some circumstances, however, FERC may wish to consider steps to allow investors to appropriate at least some additional system benefits from such transmission projects. Similarly, if FERC finds that other policy priorities curtail incentives for generation entry and expansions, it may wish to provide added generation entry incentives in areas with low reserve margins. One approach that FERC may wish to consider is encouraging load serving entities to contract to meet peak demand levels in future years. By allowing load serving entities to substitute medium to long-term demand curtailment contracts or real-

time metering programs for equivalent generation contracts, FERC may assist the states in increasing demand-side participation in electric power markets.

Respectfully submitted,

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